THE NATIONAL PROFILE AND ECONOMIC IMPACT OF BILTONG HUNTERS IN SOUTH AFRICA

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1. INTRODUCTION

The first research project conducted on biltong hunters was undertaken in 2004. This research was, however, only conducted at the Hartebees Branch of South African Hunting and Game Conservations Association (SAHGCA) in the North West province. Questions that arose from that research were; what is the profile of the average biltong hunter, how much do they spend per season on hunting, where do they live and what species do they prefer to hunt? After the success of this research, it was decided to complete a more comprehensive study on all the members of SA Hunters. This was done during June / July 2005 and the response was outstanding. At the end of 2006, negotiations started to do a third and even larger survey, this time involving all the major hunting associations. It was decided that for the 2007 survey SAHGCA, CHASA and PHASA would cooperate in the research. Combined, these three organisations provided a population of over 40 000 active members (SAHGCA 21 000; CHASA 18 000 and PHASA 1 039).

In respect of research into the hunting industry, there is more data available regarding trophy hunting than for biltong hunting. One reason for this may be that trophy hunting is strictly controlled by PHASA and by the Department of Nature Conservation. There is too substantial data available regarding game sales. But currently there is only the 2005 survey specifically regarding biltong hunting in South Africa, and the industry is in desperate need of comprehensive research concerning biltong hunting. Another major aspect that needs attention is the impact of the new fire-arms legislation upon the biltong hunting industry?

Therefore, the 2007 survey focused on the following:

- number of animals that are hunted
- number of hunting trips
- group size
- how much is spent on biltong hunting, country-wide, per season?
- which species do hunters most prefer to hunt?
- which provinces are the major hunting destinations?

These are typical questions needing to be answered, which led the way to the current research project, namely, to determine the economic impact and profile of biltong hunting in South Africa.

2. AIMS AND OBJECTIVES

After deliberations with relevant organisations, a national survey was decided in order to determine the impact of the new fire-arms legislation, as well as to ascertain the economic impact and national profile of biltong hunting. Therefore, the aim of this research is to determine the economic impact that biltong hunting has, both on South Africa's economy and it's communities.

The research will also provide answers to the following questions:

- level of education and occupation of the hunting community,
- expenditure and income,
- how many in a hunting party and the length of stay,
- number of hunting expeditions,
- types of animals hunted,
- the income generated from biltong hunting in South Africa,
- the use made by hunters of camouflage clothing,
- types of hunting rifles, and calibres, used,
- hunting method, and
- meat usages of animals hunted.

3. METHOD OF RESEARCH

It was decided to select all the members of the SAHGCA (21 000), PHASA (1 039) and CHASA (18 000) which gives a total population of (N) +/- 40 000. The research was conducted by means of a questionnaire consisting mostly of closed response questions, together with a small number of open-ended questions. The questionnaire was developed in cooperation with the South African Hunting and Game Conservation Association, and the Institute for Tourism, Wildlife Economics, and Leisure Studies at the North-West University, Potchefstroom Campus. A pilot study was conducted in August and September 2004 to test the questionnaire and to determine any problems regarding the questionnaire. The study was conducted through a random sampling method in the following branches in the North-West Province which belongs to SAHGRA; Hartebees Branch, Vaal Triangle Branch and Diamond Branch of which 87 questionnaires were received back. A report by Van der Merwe and Saayman (2004) was subsequently published.

For the national survey (2007), two methods were used to distribute the questionnaire, firstly questionnaires were mailed to the members of the SA Hunters and Game Conservation Association together with their monthly magazine (named SA Hunters/Jagters) during November/December 2007. Secondly an interactive questionnaire was loaded on to the websites of SAHGCA, PHASA and CHASA during the month of September/October 2007. The cut-off date for receiving questionnaires was set for the end of January 2008. 676 (n) questionnaires were returned. From a research point of view, these results are seen as good. Questionnaires were received back via e-mail, post, and fax.

3.1 Terminology

The authors used the following terms in the context explained below:

- ***Biltong***
  Can be defined as meat that is dried, smoked, spiced (salted) or treated in any other way for the purpose of preserving and consummation.

- ***Biltong hunting***
  Biltong hunting can be defined as a cultural activity where wildlife is hunted by means of a rifle, bow, or similar weapon for the usage of a variety of meat (venison) products such as biltong and salami.

- ***Biltong Hunter***
  A biltong hunter is defined as a person participating in the activity of biltong hunting.

- ***Trophy hunting***

  Trophy hunting can be defined as an activity where wildlife is hunted by means of a rifle, bow or similar weapon primarily for it horns (measured according to Rowland Ward and Safari Club International) and/or the skin in order to be displayed as trophies.

- ***Trophy Hunter***

  A trophy hunter is defined as a person participating in the activity of trophy hunting.

- ***Game farm***

  A game farm is defined as land that is adequately fenced, with a variety of game species that can be used for hunting, photographic opportunities, environmental education, meat production, live game sales and to provide infrastructure and suprastructures for ecotourists. It includes both consumptive and non-consumptive utilisation of wildlife.

- ***Bakkie***

  Also known as LDV, small truck or pick-up.

4. RESULTS OF THE BILTONG HUNTING SURVEY

SECTION A: SOCIO-DEMOGRAPHIC DETAIL

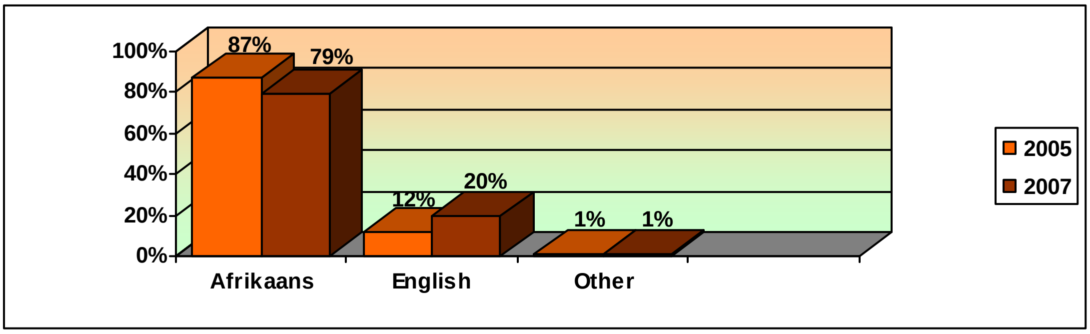
4.1 GENDER

The majority of respondents in 2007 were males (99%). Only 1% of the respondents are female. When comparing participation in the survey with that of 2005, there was a 1% decline in female respondents (Table 1). Obviously, this is an activity strongly dominated by men. From the results, it is clear that an effective marketing and awareness strategy needs to be developed that will make women more aware of hunting as a leisure activity or sport. One reason for the low response could also be that, in the case of a family, it is the menfolk who completed the questionnaire or who belong to the hunting organisation.

Table 1: Gender

YEAR	MALE	FEMALE
2005	**98%**	2%
2007	**99%**	1%

4.2



HOME LANGUAGE

Figure 1: Home Language

The majority of the respondents in 2007 were Afrikaans speaking (79%), compared to the 87% in 2005 (Figure 1). The number of English speaking respondents increased by 8% over the 2005 survey. The “other” category accounts for 1% and mainly included other African languages. The increase of English speaking respondents could be due to the cooperation of hunting organisations in the 2007 survey that have more English speaking members.

4.3 AGE

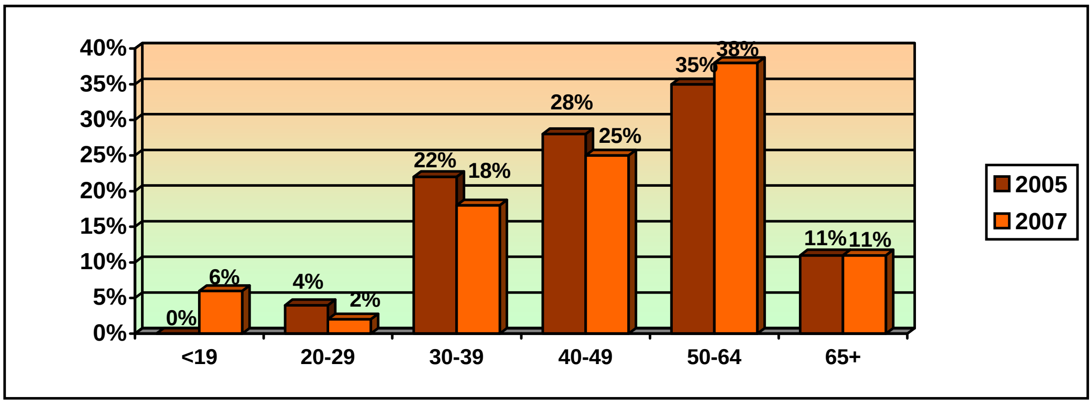


Figure 2: Age

As shown in Figure 2, the highest category of respondents were between 50 and 60 years of age (38%) in 2007, and 35% in 2005. The youngest category, namely 19 years and younger, showed an increase when compared to 2005. In general, the age profile remains similar to that of 2005 survey.

4.4 MARITAL STATUS

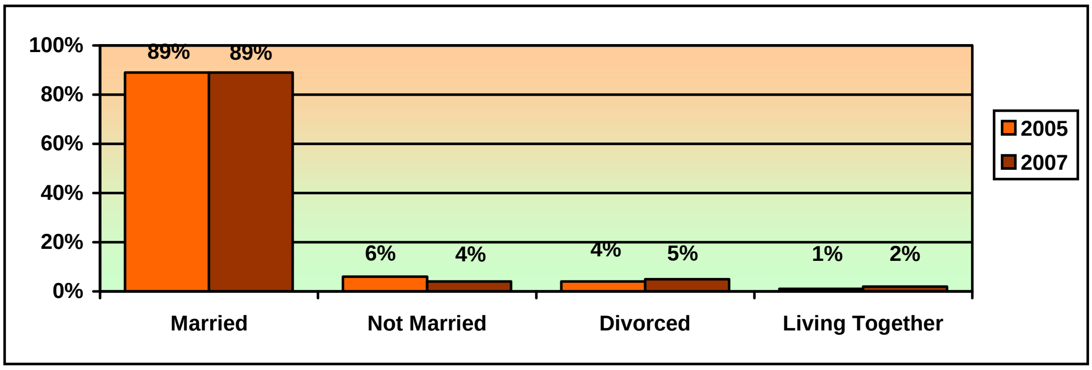


Figure 3: Marital Status

Most respondents, according to Figure 3, are married (89%) followed by those who are divorced (5%), and not married (4%). Game farm owners can also develop hunting packages for families that will influence the number of women hunters and the accompanying children.

4.5 LEVEL OF EDUCATION

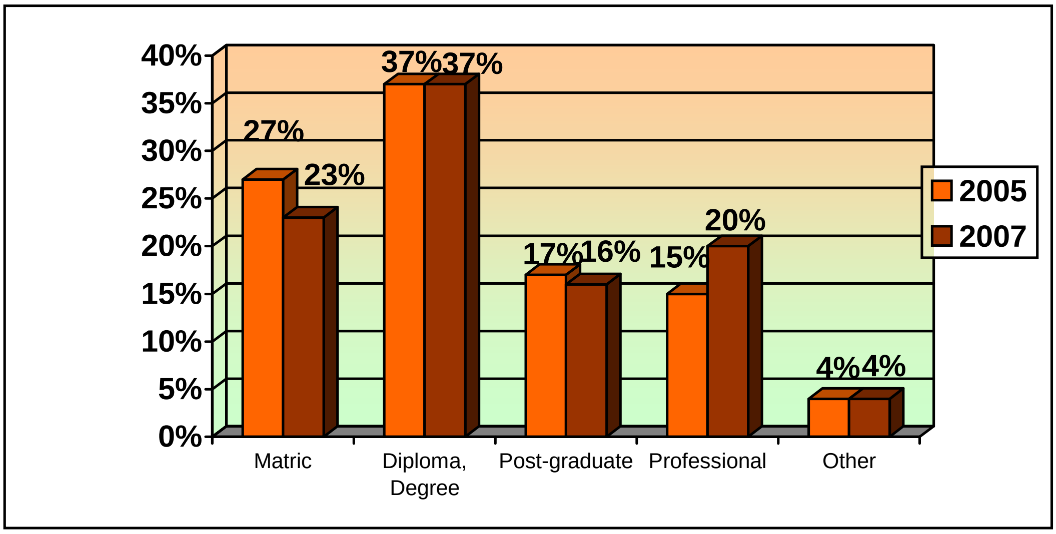


Figure 4: Level of Education

In both surveys (2005 and 2007), the majority of respondents indicated that they have a degree or diploma (37%). Based on the results, 73% of the hunters (Figure 4) have a post-matric qualification. Overall, the results indicate that biltong hunters are well educated.

4.6 PREFERRED MAGAZINES

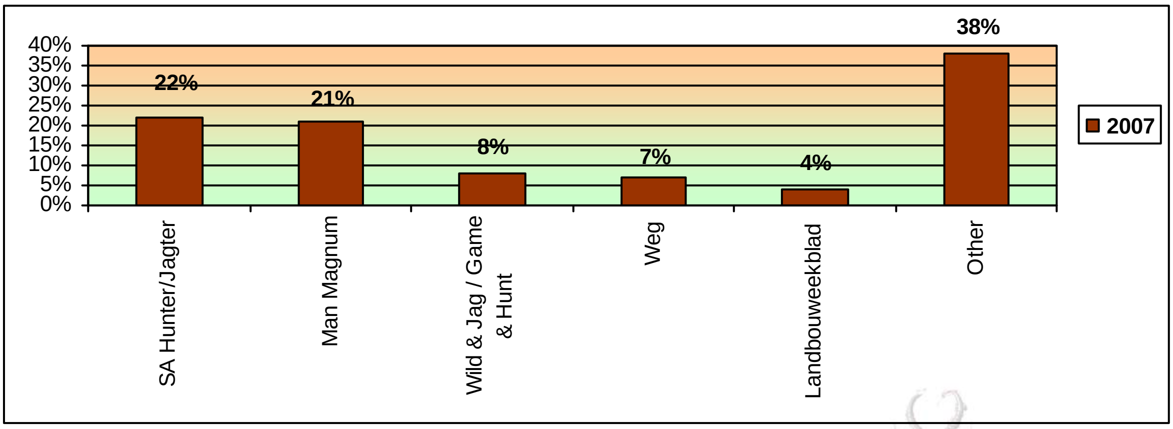


Figure 5: Preferred Magazines

From the information reflected in Figure 5, the magazines that are read mostly by biltong hunters are SA Hunter (22%), Man Magnum (21%), Game & Hunt (8%), Weg (7%), and Landbouweekblad (4%). Other magazines (38%) which accounts for less than 4% per magazine, that were also mentioned, are listed in Table 2. This information is important from a marketing point of view for game farm owners.

Table 2: Other Magazines

AA Reis	African Outfitter	African Sporting Gazette
African Hunter	Beeld	Bow hunter
Bicycling	Bike SA	Big Bore Journal
Car	Caravan Complete	Fisherman
Complete Golfer	Country Life	Fly Fisherman
ESA	Farmers Weekly	Financial Mail
Finance Weekly	Fin Week	Fishing & Hunting Journal
Guns & Ammo	Golf Digest	Huisgenoot/You
Hunting	Handyman	Hengel
News papers	Men's Health	Nayala News
National Geographic	Wegsleep	Popular Mechanics
Rapport	Runners World	Rifle Shooter
Safari	SA Flyer	SA Outfitter
SA Bass	Stywe Lyne	Time
Wegbreek	Wine	
Wiel	Wingshooters	

4.7 PROVINCE OF RESIDENCE

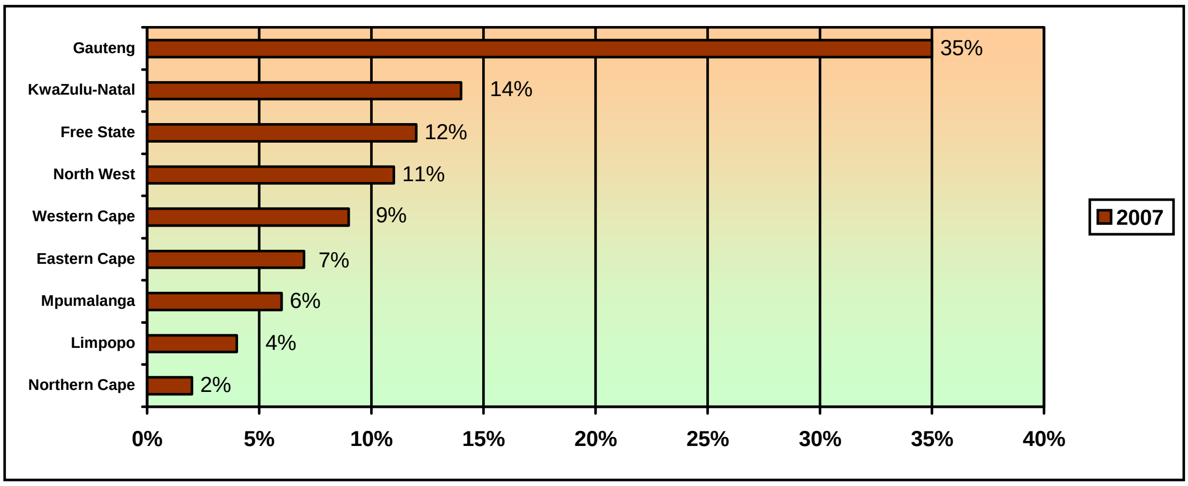


Figure 6: Province of Residence

The majority of respondents reside in Gauteng (35%); followed by those from KwaZulu-Natal (14%), Free State (12%), North West (11%), Western Cape (9%), Eastern Cape (7%), Mpumalanga (6%), Limpopo (4%), and the

Northern Cape (2%). Therefore, these provinces are the main markets where biltong hunters in South Africa can be found.

4.8 OCCUPATION

The majority of respondents in 2007 are self employed (25%), professional (20%), in management positions (14% decline of 6%), in the Mining sector (2%), Farmers (11%), Sales Personnel (4%), Technical staff (11%) or in Administrative positions (2%). The "others" category (14%) include retired people (Figure 7).

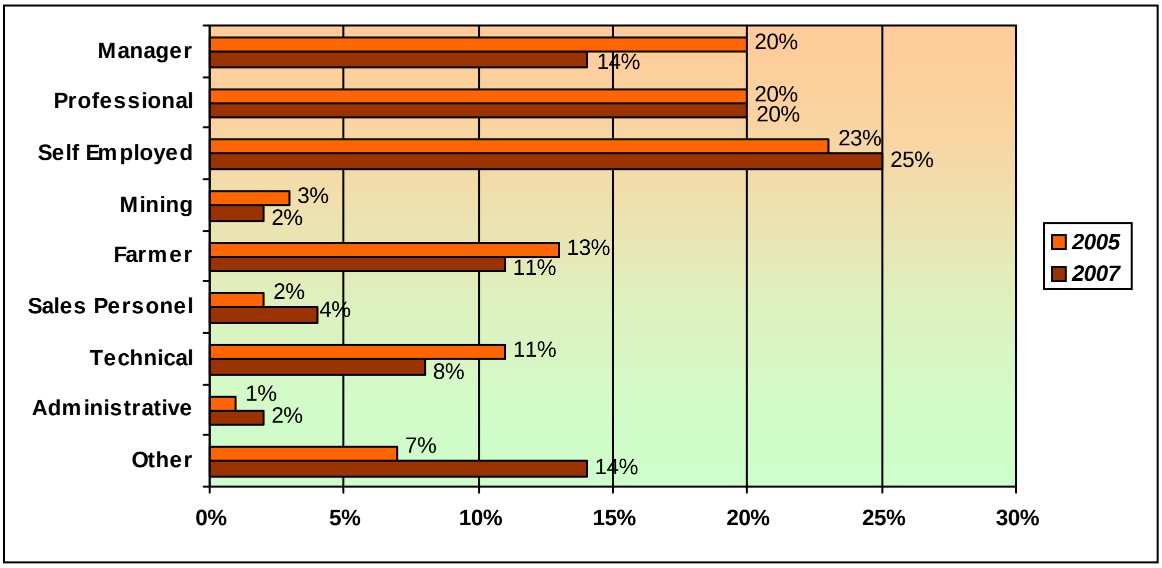


Figure 7: Occupation

SECTION B: ECONOMIC IMPACT

4.9 ANNUAL GROSS INCOME

Table 3 indicated that 16% of the respondents fall in the category earning R100 001 to R200 000 per annum, 13% in the category R200 001 – R300 000, 12% in the category R400 001-R500 000 and 11% in the category R300 001-R400 000. The average income per annum for 2007 was R 457 053, 30 per respondent. These statistics correlate well with professions and levels of education.

Table 3: Annual gross income

Annual income	2005	Annual income	2007
>R 450 000	21%	>R 1 000 001	**6%**
R 400 001 – R 450 000	3%	R 900 001 – R 1 000 000	**4%**
R 350 001 – R 400 000	9%	R 800 001 – R 900 000	2%
R 300 001 – R 350 000	4%	R 700 001 – R 800 000	4%
R 250 001 – R 300 000	11%	R 600 001 – R 700 000	3%
R 200 001 – R 250 000	10%	R 500 001 – R 600 000	6%
R 150 001 – R 200 000	12%	R 400 001 – R 500 000	12%
R 100 001 – R 150 000	15%	R 300 001 – R 400 000	11%
R 50 001 – R 100 000	12%	R 200 001 – R 300 000	13%
<R 50 000	3%	R 100 001 – R 200 000	16%
		<R 100 000	23%
		AVERAGE R 457 053,30	

4.10 GROUP SIZE

Sixty-eight (68) percent of respondents indicated in 2007 that they prefer to hunt in a group while 30% prefer to hunt alone (Figure 8). When compared to 2005, there is no significant difference. If the number of hunters per hunting group is determined (Table 4), the groups are 4 persons (32%), 6 persons (13%) and 3 persons (11%), respectively. The average size per group is therefore 4.1 persons.

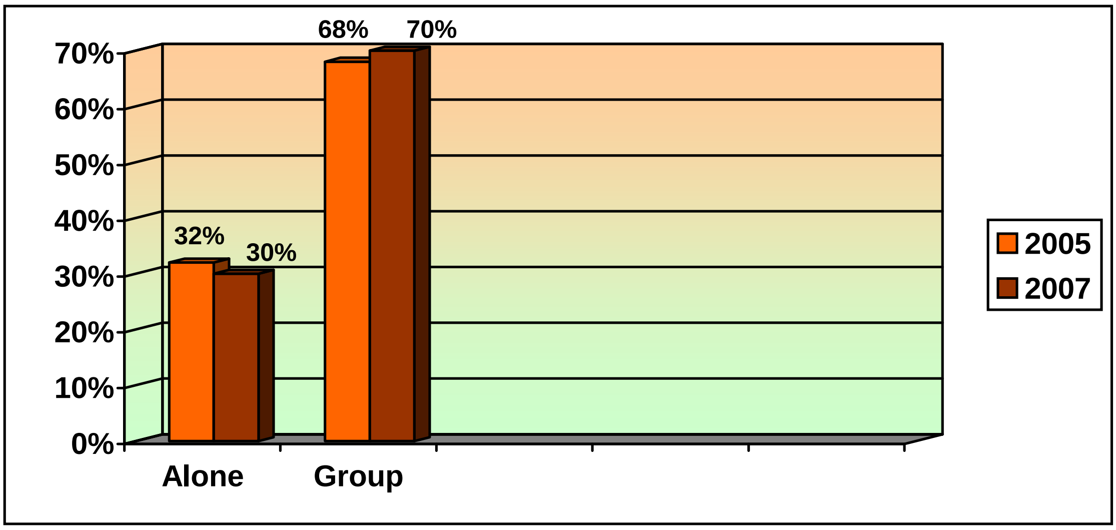


Figure 8: Group size

4.11 HUNTING GROUP

Table 4: Group Sizes

	2005	2007
Alone	0%	17%
2 Persons	7%	8%
3 Persons	**13%**	**11%**
4 Persons	**44%**	**32%**
5 Persons	10%	5%
6 Persons	**15%**	**13%**
7 Persons	1%	2%
8 Persons	7%	6%
9 Persons	1%	0%

4.12a: MODE OF TRANSPORTATION

From Figure 9, it can be seen that most of the respondents preferred a 4x4 vehicle (46%). In 2005, the leading mode of transport was a bakkie (or Light Delivery Vehicle – LDV) also known as a 4x2 (44%). This is now the second most preferred type of transport in 2007 (41%). Other categories of vehicles are not greatly used by hunters.

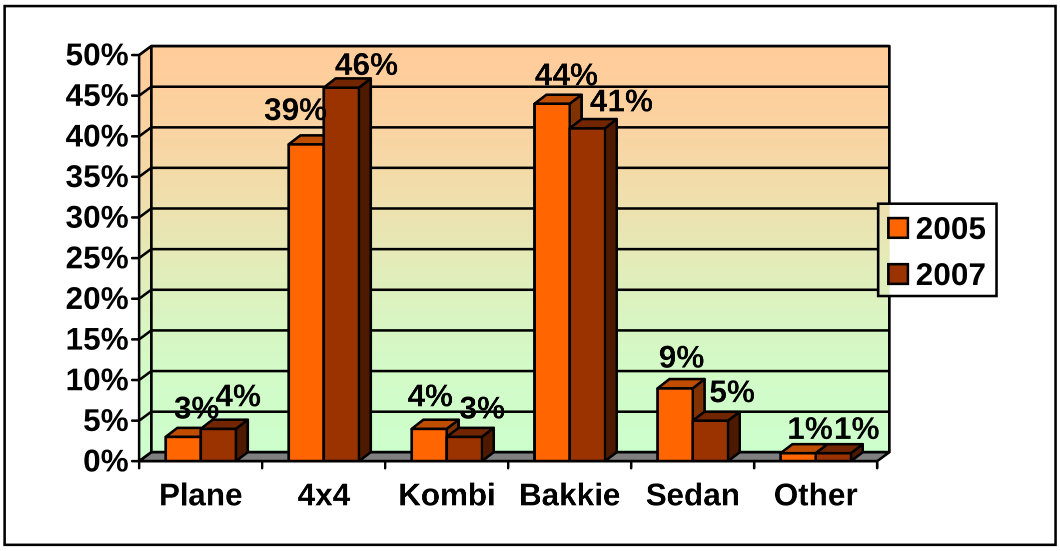


Figure 9: Mode of Transport

4.12b: MAKE OF VEHICLE

Table 5: Make of Vehicle

	2005	2007
Toyota	**32%**	**41%**
Isuzu	**18%**	**14%**
Nissan	**12%**	**10%**
Ford	**9%**	**8%**
Land Rover	6%	5%
Colt	1%	4%
Mitsubishi	9%	3%
Mazda	6%	3%
Other		12%

According to Table 5, most respondents prefer a Toyota. The 41% in 2007 is an increase of 9% over the results of the 2005 survey. Toyota is followed by Isuzu (14%), Nissan (10%) and Ford (8%). These statistics are a good reflection of total sales of 4x4's and LDVs in South Africa. Table 6 shows a listing of other type of vehicles also used by biltong hunters.

Table 6: Other Make of Vehicles (less than 3 %)

Hyundai	Kia	Audi	Volkswagen
Chevrolet	Honda	Porsche	Mercedes Benz
Opel	Renault	Sante Fe	
Seat	Subaru	Suzuki	
Tata	BMW	Volvo	

4.12c: CAMOUFLAGE CLOTHING

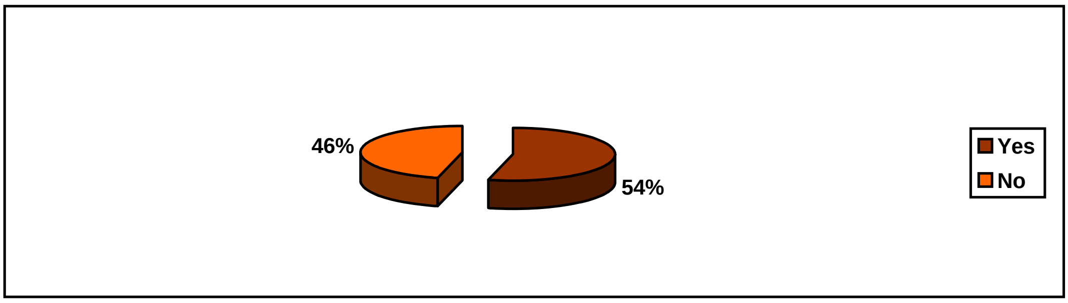


Figure 10: Camouflage Clothing

According to Figure 10, 54% of the respondents use camouflage clothing and 46% chose not to use camouflage. This shows that hunting merchandise is an important part of the hunting fraternity's purchases. Table 10 also shows that hunters spend a significant amount on clothing (R359.29 per person).

4.13 TIMES GONE HUNTING THE PAST YEAR

In 2007, 21% of the respondents indicated that they went on hunting trips 2 or 3 times, respectively. Fourteen (14) percent hunt 4 times per year. The average number of "times gone hunting" is 4.2 times per year, which is higher than the 2005 survey where respondents indicated that they hunted 3 times annually. The fact that hunters took more hunting trips in 2007 will have an impact on the total spending of biltong hunters per season. This is reflected in Figure 11.

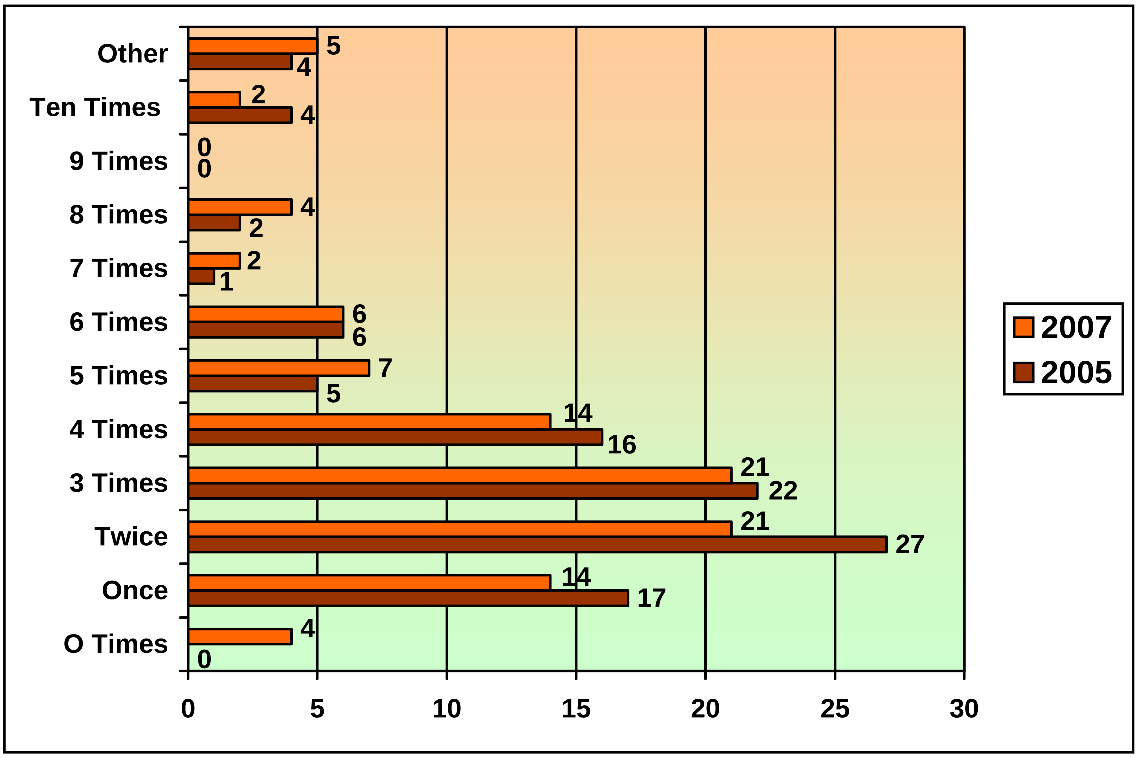


Figure 11: Times gone Hunting

4.14 PREFERRED COUNTRY TO HUNT

Table 7: Preferred Country to hunt

	2005	2007
South Africa	76 %	80%
Namibia	19%	15%
Botswana	2%	2%
Other	3%	3%

Eighty (80) per cent of the respondents prefer to hunt in South Africa. This compares to the 76% in 2005. Fifteen (15) percent of the respondents like to hunt in Namibia (3% less than 2005) and 2% in Botswana. The remaining 3% enjoy hunting in countries such as Zambia, Zimbabwe, and Mozambique. It seems that the new fire-arm legislation has not had a major impact on this aspect of the hunting industry.




4.15 PREFERRED PROVINCE

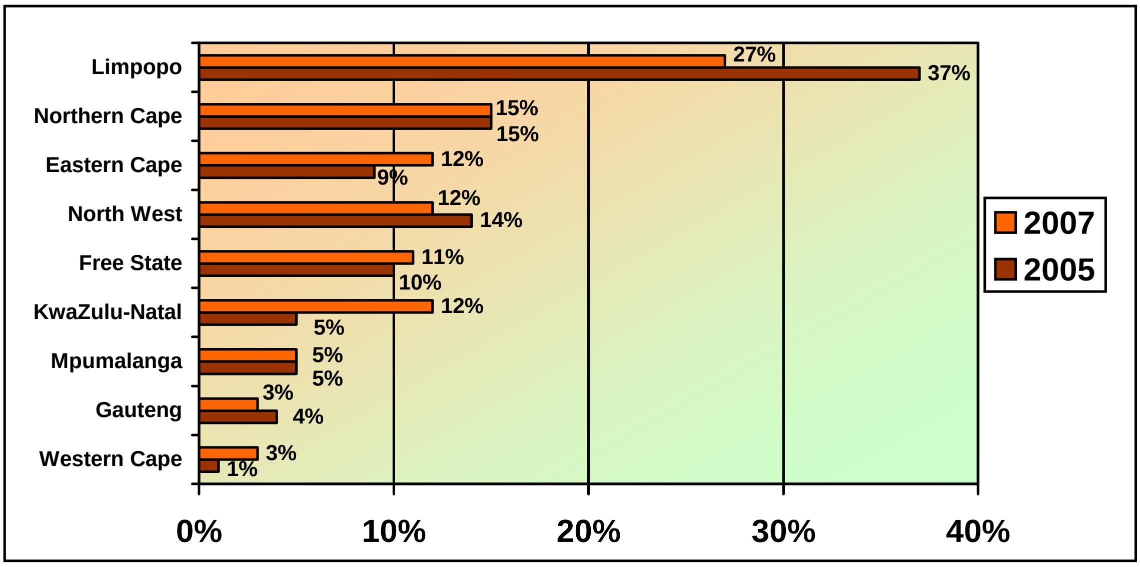


Figure 12: Preferred Province

Based on the results displayed in Figure 12, Limpopo (27%) remains the preferred biltong hunting destination followed by the Northern Cape (15%), Eastern Cape, North West, and KwaZulu-Natal provinces with 12% respectively (Figure 12).

4.16 REASONS FOR CHOOSING PREFERRED PROVINCE

Table 8: Reasons for choosing preferred province

Reasons	Percentage
Distance	20%
Wildlife	16%
Bushveld	15%
Economic	9%
Open fields	5%
Walk & stalk	4%
Familiar	4%
Own / Family farm	4%
Nature	3%
Facilities are good	2%
Friends	3%
Climate, Availability, Birds and Variety of terrain	1 % each

The most important reasons why respondents prefer the provinces listed in Figure 11 are because of the distance, implying proximity to the home town, where 20% of the respondents indicated the importance of this aspect. Sixteen (16) percent preferred the wildlife in the given province, 15% enjoy the bushveld and 9% of the respondents indicated that it is affordable, therefore offering value for money (Table 8). With the increases in fuel prices, distance from home base is anticipated to play an even more important role in the choice of preferred destination.

4.17 LENGTH OF STAY

Table 9: Length of Stay

Length of Stay (Days)	2005	2007
1	2%	5%
2	6%	7%
3	**27%**	**29%**
4	**35%**	**32%**
5	18%	14%
6	4%	3%
7	5%	6%
8	1%	1%
9	0%	0%
10+	2%	3%
AVERAGE DAYS	**4 days**	**4 days**

From Table 9, it can be seen that 32% of hunters stay 4 days at their destination, while 29% spend three days, followed by 14% that stay for 6 days. The average stay is 4 days, which is the same as the 2005 survey. Therefore, it may be deduced that hunters hunt mostly over weekends starting on a Thursday and ends on a Sunday.

4.18 AVERAGE EXPENCES

As indicated in Table 10, the average spending per hunter per season in 2005 was R 4 130, 00, and in 2007 this increased to R9 805, 64 (excluding the costs of game hunted). This indicates a significant increase in expenses and can be linked to more frequent hunting trips (average 2005 was 3 trips and average 2007 was 4 trips) as well as a sharp increases in fuel, accommodation, and food costs.

Table 10: Average Expenses

2005		2007	
Category	Total Expenditure per season (Excluding Game)	Category	Total Expenditure per season (Excluding Game)
Accommodation	R 869.00	Accommodation	R 1 967.10
Fuel	R 734.00	Fuel	R 1 769.07
Food	R 452.00	Food	R 1 070.58
Meat processing	R 417.00	Meat processing	R 928.52
Ammunition	R 279.00	Ammunition	R 772.80
Gear	R 278.00	Gear	R 659.30
Daily fees	R 260.00	Daily fees	R 556.90
Beverages	R 245.00	Beverages	R 582.22
Butchery facilities	R 229.00	Butchery facilities	R 435.38
Clothes	R 139.00	Clothes	R 359.29
Medicine	R 54.00	Toiletries	R 111.80
Toiletries	R 51.00	Medicine	R 110.76
Tobacco	R 21.00	Tobacco	R 38.31
Other	R 102.00	Other	R 443.62
TOTAL	**R4 130.00**	**TOTAL**	**R9 805.64**

In both 2005 and 2007 the largest costs are those made up of accommodation (from R 869, 00 to R 1 967, 10), fuel (from R734, 00 to R 1 769, 07), food (from R452, 00 to R 1 070, 58) and R417.00 to R928, 52 for the meat processing. If the amounts spent in 2007, as recorded in Table 3.10, is multiplied by the total of members of CHASA, PHASA and SA Hunters (40 000 members), it totals R 392 225 431 per annum (excluding game). If there are 200 000 biltong hunters in South Africa, the total amount spent will be R1, 96 billion per annum (excluding game).

4.19 GAME SPECIES AND AVERAGE PRICES

Table 11: Top ten most hunted game species

Rating	Game Species	2005	Rating	Game Species	2007
1	**Springbuck**	**29%**	**1**	**Springbok**	**25%**
2	**Impala**	**19%**	**2**	**Impala**	**18%**
3	**Blesbuck**	**12%**	**3**	**Blesbuck**	**13%**
4	Kudu	8%	**4**	Warthog	10%
5	Warthog	8%	**5**	Kudu	9%
6	Blue Wildebeest	5%	**6**	Blue Wildebeest	5%
7	Oryx (Gemsbok)	5%	**7**	Oryx	4%
8	Eland	2%	**8**	Mountain Reedbuck	2%
9	Mountain Reedbuck	2%	**9**	Bush Pig	2%
10	Red Hartebeest	2%	**10**	Black Wildebeest	2%

Table 11 indicates the top five game species that were hunted during 2007. Springbuck comprise 25% (a decline of 4% compared to 2005), Impala 18% (a decline of 1%), Blesbuck 13% (increase of 1%), Warthog 10% (an increase of 2%) and Kudu 9% (an increase of 1%) Table 12 indicates that Kudu (R1 820 249,00), Blue Wildebeest (R 924 190), Impala (R895 045), Springbuck (R 761 595) and Oryx (Gemsbok) (R745 733) were the top 5 species regarding income generated in 2007 and contributed R 5 146 812,00 of the total amount of R 8,306,376.00. These species contribute more than half the total income from the species hunted in both 2005 and 2007.

Table 12: Top five species regarding income generated

	2005			2007	
Rating	Species	Revenue	Rating	Species	Revenue
1	**Kudu**	**R 2 511 780.00**	**1**	**Kudu**	**R1 820 249.00**
2	Blue Wildebeest	R 1 443 250.00	**2**	Blue Wildebeest	R 924 190.00
3	Impala	R 1 308 205.00	**3**	Impala	R 895 045.00
4	Oryx (Gemsbok)	R 1 241 200.00	**4**	Springbok	R 761 595.00
5	Springbuck	R 1 025 975.00	**5**	Oryx	R 745 733.00
	TOTAL	**R 7 530 410.00**		**TOTAL**	**R 5 146 812.00**

Table 13: Game species and average prices

Game Species	Total Animals	Total Animals (%)	Total Amount	Average Price
Springbuck	1960	24.58%	R761,595.00	R 388.57
Impala	1415	17.75%	R 895,045.00	R 632.54
Blesbuck	1024	12.84%	R 661,834.00	R 646.32
Warthog	803	10.07%	R 308,500.00	R 384.18
Kudu	698	8.75%	R 1,820,249.00	R 2 607.81
Blue Wildebeest	408	5.12%	R 924,190.00	R 2 265.17
Oryx (Gemsbok)	328	4.11%	R 745,733.00	R 2 273.58
Mountain Reedbuck	159	1.99%	R 76,210.00	R 479.31
Bush pig	142	1.78%	R 54,300.00	R 382.39
Black Wildebeest	122	1.53%	R 217,570.00	R 1 783.36
Red Hartebeest	119	1.49%	R 257,500.00	R 2 163.87
Eland	117	1.47%	R 562,900.00	R 4 811.11
Reedbuck	113	1.42%	R 121,415.00	R 1 074.47
Zebra	93	1.17%	R 368,600.00	R 3 963.44
Duiker	90	1.13%	R 24,520.00	R 272.44
Bushbuck	67	0.84%	R 89,600.00	R 1 337.31
Steenbuck	35	0.44%	R 18,700.00	R 534.29
Grey Rhebuck	34	0.43%	R 29,600.00	R 870.59
Nyala	22	0.28%	R 108,100.00	R 4 913.64
Waterbuck	19	0.24%	R 104,800.00	R 5 515.79
Ostrich	17	0.21%	R 17,380.00	R 1 022.35
Giraffe	8	0.10%	R 42,500.00	R 5 312.50
Klipspringer	7	0.09%	R 21,200.00	R 3 028.57
Bontebuck	5	0.06%	R 5,560.00	R 1 112.00
Grysbok	5	0.06%	R 13,300.00	R 2 660.00
Oribi	2	0.03%	R 1,500.00	R 750.00
Other	161	2.02%	R 539,75.00	-
TOTAL	**7973**	**100.00%**	**R 8,306,376.00**	

The preferred biltong species are listed in Table 13 with a total spent of approximately R 8, 3 million. The most preferred biltong species in 2007 is Springbuck (24. 58%). The second most preferred is Impala with 17.75%, followed by Blesbuck 12.84% and Warthog with 10.07%. The average number of different species hunted in 2007 is 4.4 species per season.

The average amount spent on game per season by a hunter is R 12 252.47. This results in a total spending of R 22 058.11 per person per hunting season (including game costs). If this is multiplied by the number of members (40 000) it adds up to R 882 324 306.88. Multiplied by the potential number of biltong hunters in South Africa (R 22 058.11 x 200 000), biltong hunters direct contributions to the industry are R 4 411 621 534.41 (R 4.4 Billion) per season. In other words, a R1.3 Billion increase over the 2005 results. This is a significant increase and is fuelled both by increases in prices (fuel, accommodation, food) and by the increase in frequency of hunting trips from 3 to 4 trips per hunter per season.

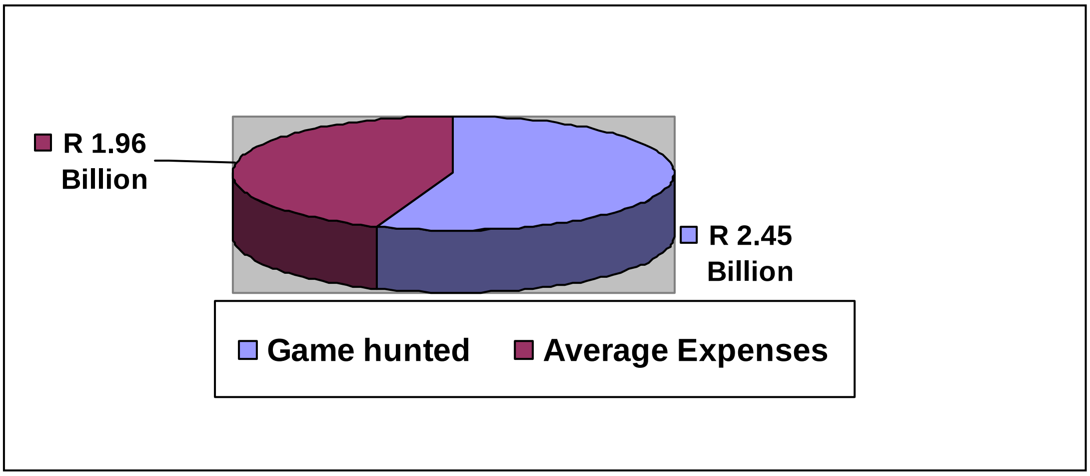


Figure 13: Biltong hunting revenue distribution

As Figure 13 shows, it is clear that general expenditure per season totals more than R1.96 billion and game hunted costs are over R2.45 billion. As indicated earlier, 15% of the hunters hunt in Namibia, which means that R367.6 million of the money spent on game goes directly to Namibian game industry. This excludes general expenditure in Namibia.

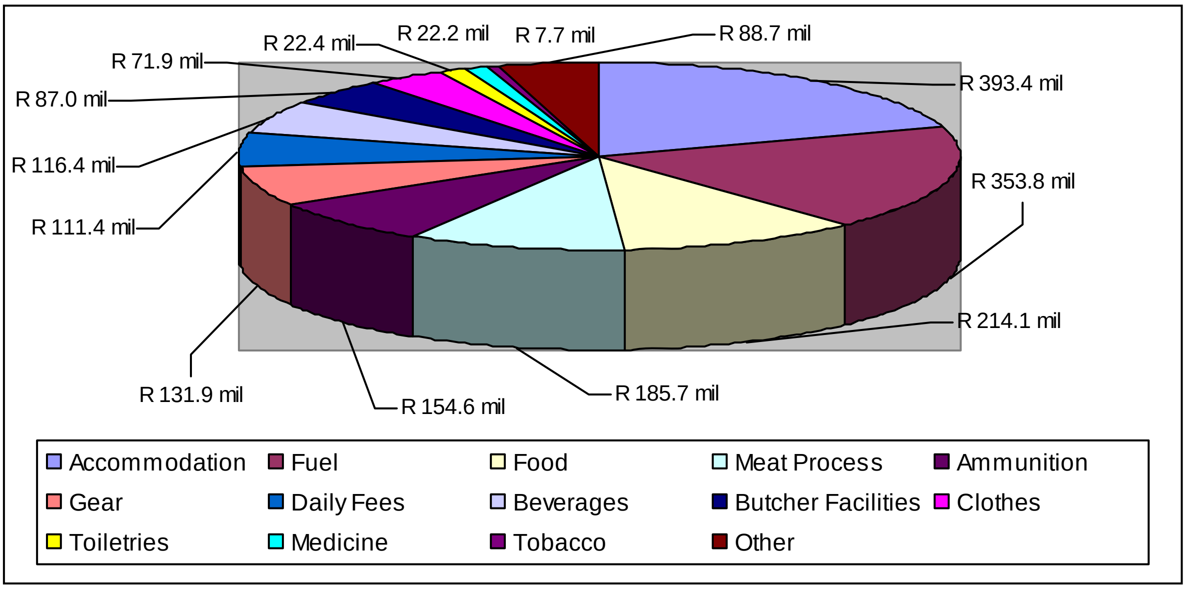


Figure 14: General expenditure revenue distribution

From Figure 14, it is clear that R393.4 million of the total general expenditure distribution is spent on accommodation, R353.8 million on fuel, R214.1 million on food, R185.7 million on meat processing, R154.6 million on ammunition, R131.9 million on gear , R116.4 million on beverages and R111.4 million on daily fees.

SECTION C: HUNTING DETAILS

4.20 MAIN REASON FOR HUNTING

The main reason for hunting indicated by the respondents both in 2005 and in 2007 is primarily for meat (biltong), 28% (in 2007) as a leisure activity, 15% for socialising, 10% for trophy hunting and the remaining 10% for reasons such as business, hobby, culture or the enjoyment of nature (Table 14). Interesting is the fact that 10% of the respondents are also trophy hunters. It can be seen from these results that leisure and socialisation plays an important role. However sourcing meat to be turned into biltong remains the main motive, therefore one could refer to these hunters as biltong hunters.

Table 14: Reason for Hunting

	2005	2007
Biltong	43%	37%
Leisure	32%	28%
Socialising	11%	15%
Trophy	11%	10%
Other	3%	10%

4.21a: PREFERRED TYPE OF WEAPON FOR HUNT

Table 15: Preferred type of weapon

	2005	2007
Rifle	**88%**	**82%**
Bow Hunting	5%	7%
Hand Weapon	4%	3%
Muzzle Loader	2%	2%
Other	1%	6%

Table 15 indicates that the preferred type of weapon in 2005 and 2007 used by biltong hunters is the rifle. Eighty-two (82) percent (5% less than in 2005) of all respondents prefer the rifle for hunting purposes. Other types of weapons that are used by hunters are bows (7%), and hand weapons (3%).

4.21b: PREFERRED CALIBRE

The top 4 type of rifles used for hunting are the same for 2007 and 2005, namely: Musgrave (18%), Brno (13%), Sako (12%), and Mauser (7%). The remaining types of rifles used (5% or less) are listed in Table 16. The preferred calibres in both 2005 and 2007 are the .30-06 Springfieldwith 18% (an increase of 1%), .308 Win with 10% (a 1% decline), .243 Win with 10% (an increase of 1%) and .375 H & H Mag with 8% (a decline of 2%). Other represents the calibres that are less than 1% (Table 17).

Table 16: Make of Rifle

Make of rifle	2005	2007
Musgrave	**20%**	**18%**
Brno	**19%**	**13%**
Sako	**15%**	**12%**
Mauser	**8%**	**7%**
Winchester	<1%	5%
Lee Enfield	4%	4%
Ruger	4%	4%
CZ	<1%	3%
Sauer	<1%	3%
Remington	<1%	3%
Holland & Holland (H & H)	6%	2%
Tikka	1%	1%
Steyr Mannlicher	<1%	1%
Vektor	2%	1%
Beretta	<1%	1%
Browning	<1%	1%
Truvelo	<1%	1%
Savage	<1%	1%
Weatherby Mark	<1%	1%
Zastava	<1%	1%

Shotgun	<1%	1%
Parker Hale	<1%	1%
Other	13%	15%

Table 17: Preferred calibre

Preferred Calibres	2005	2007
.30-06 Springfield	**17%**	**18 %**
.308 Win.	**11%**	**10%**
.243 Win.	**9%**	**10%**
.375 H & H Mag.	**10%**	**8%**
.270 Win.	9%	7%
.303 British	7%	7%
12 gauge shotgun	7%	6%
7x57 Mauser	4%	4%
.300 Win. Mag.	3%	3%
.22 Rim Fire	4%	3%
.223 Remington	3%	2%
7mm Remington Manum.	3%	2%
7x64mm Brenneke	2%	2%
9.3x62mm Mauser	2%	2%
.222 Remington	2%	2%
.25-06 Remington	1%	1%
8x57mm Mauser	1%	1%
.338 Win. Mag.	1%	1%
22-250 Remington	1%	1%
.458 Win.	1%	1%
6mm Musgrave	1%	1%
6.5x55mm Swedish Mauser		1%
9.3x64mm Brenneke		1%
Other		6%



4.21c: PREFERRED HUNTING AREA

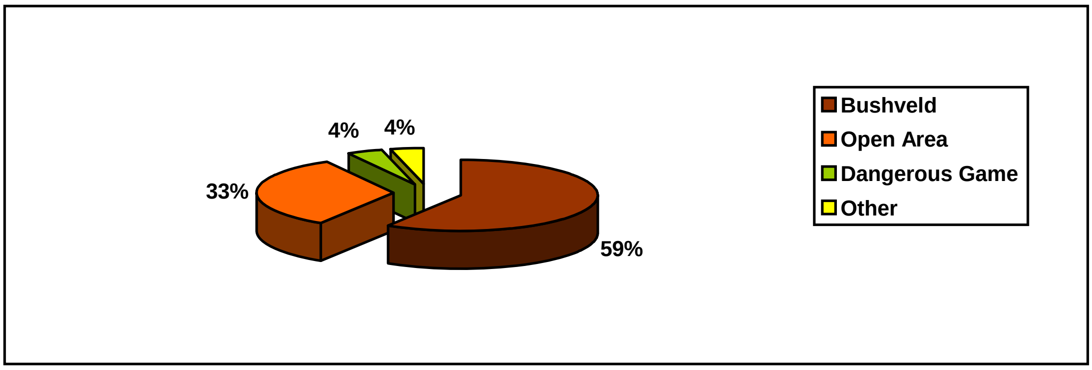


Figure 15: Preferred Hunting Area

Of the respondents, 59% prefer to hunt in the bushveld, 33% in an open area, 4% hunt dangerous game, and 4% represent other preferences (Figure 15).

4.22 HUNTING METHOD

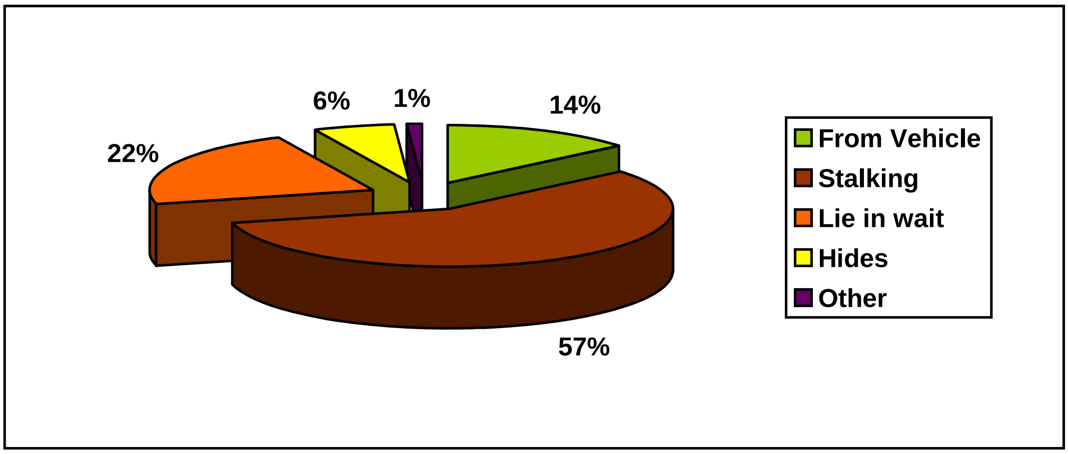


Figure 16: Hunting Method

The most popular hunting methods are Stalking (57%), Lie in wait (22%), from a Vehicle (14%), while 6% use Hides. Interesting is the fact that only 14% of respondents hunt from a vehicle (Figure 16).

4.23 NUMBER OF WEAPONS

The purpose of this question was to determine the number of weapons used by biltong hunters for hunting purposes. Twenty-nine (29) per cent of respondents use only 1 weapon, 31% use 2 weapons, and 17% use 3 weapons. The remaining 20% use 4 or more weapons for hunting. Therefore, the average amount of weapons used during 2007 per person is 2.7 (Table 18).

Table 18: Number of weapons

Number of weapons	Percentage
0	3%
1	**29%**
2	**31%**
3	**17%**
4	7%
5	6%
6	2%
7	1%
8	1%
10 and more	3%

4.24 HUNTING ASSOCIATIONS

Table 19: Hunting Associations (more than 4%)

Hunting associations	Percentage
SA Hunters and Game Conservation Association (SAGHCA)	58%
Confederation of Hunters Associations of South Africa (CHASA)	24%
Wingshooters	4%
Other	14%

The majority of hunters (58%) belongs to SAHGCA (SA Hunters and Game Conservation Association) (Table 19), twenty four (24%) per cent are representing CHASA (Confederation of Hunters Associations of South Africa) and four per cent (4%) Wingshooters. Table 20 shows “other” hunting associations with less than 2% of respondents. It is also evident from the long list that this industry consists of more than 50 organisations. This highlights how fragmented the hunting industry is.

Table 20: Other Hunting Associations (less than 2%)

Boone & Crockett Club	Zengela Hunting Club	Dallas Safari Club
Big Bore Association	GMSSA	SA Clay Pigeon Club
Bow Hunters Association	PE Clay Pigeon Club	Hartbeesfontein Hunting Association
GSSC	Wes-Boland Hunters	Ventersdorp Hunters
NJWV Table Mountain	Kei Bow Hunting Club	Gauteng Rifle Association
SA Hunting Rifle Shooting Association	Olifantsriviers Bow Hunting club	Ellisras Wildlife study group
Overby Hunting	Finch Wild Life Club	BASA
Cape Hunters	Western Cape Hunters	Westgold Hunters
AGRED – African gamebird research, education and development trust	Antique Ammo Collectors Association	Southern Cape Hunters and Game Conservation Association
BMSSK	Bonsai Hunters Club	Durban Deep Rifle Club
Professional Hunters Association South Africa	George Sport Shooting Club	Archery Excellence Bow Hunting Club
Langkloof Hunting Club	Hunt Point Retrieve	Wildlife Ranching SA
Lowveld Hunters	Nature Conservation Club Klerksdorp	Premier Mine Wild Life Conservation
CIC	RCGMA	Rowland Ward
Pretoria Weapon and Ammunition Collectors	SA Sport and Hunt Federation	SAACA
SABA	Sandveld	Safari Club International
Transkei Hunting Association	Bloemfontein Hunters	

4.25 EXPECTATIONS OF HUNTING ASSOCIATIONS

In Figure 17, hunters were to indicate their expectations of a hunting association. The majority (34%) of hunters expect their Hunting Associations to inform them. Therefore, a hunting association has an important role to play as a communicator of information. Twenty-three (23) per cent require workshops, 22% expect their association to negotiate on their behalf, 17% expect the association to handle fire arm applications and renewals and 4%

have other expectations. Hence, it can be seen that being informed of new developments and trends plays the important role.

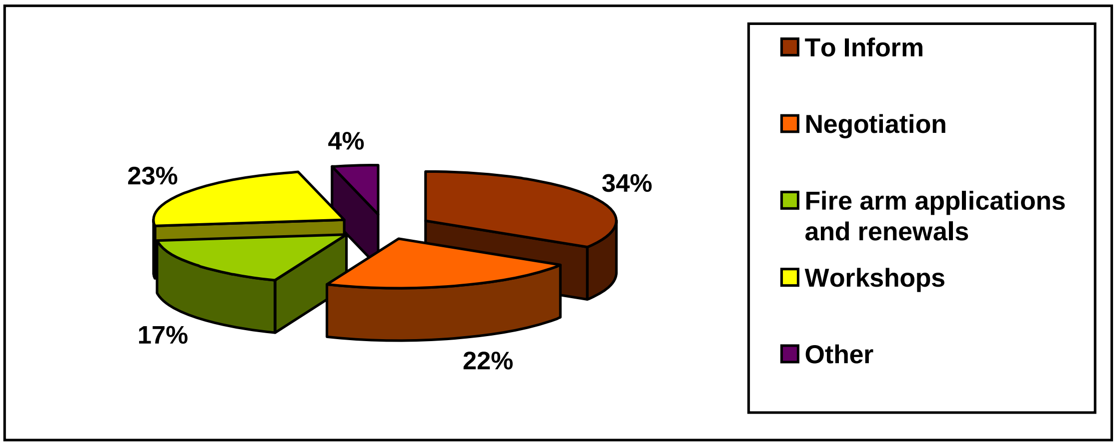


Figure 17: Expectations of Hunting Associations

4.26 HUNTING TRAINING

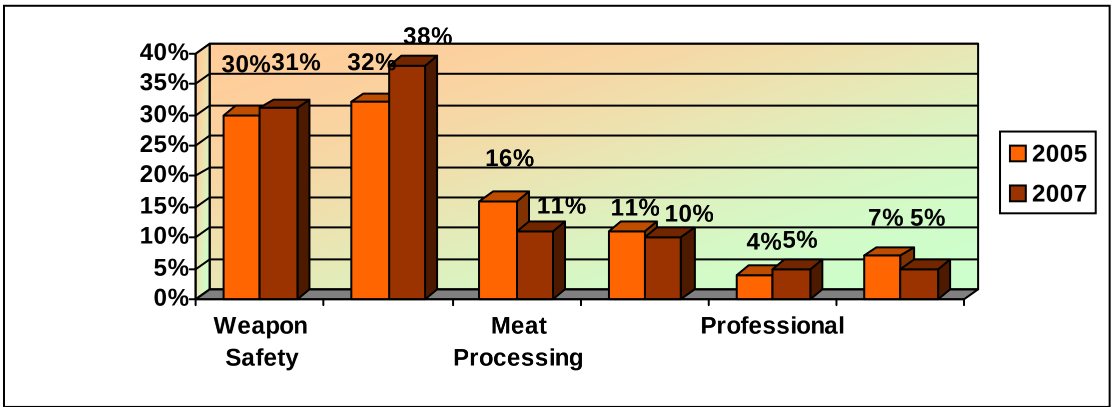


Figure 18: Hunting Training

Respondents, according to Figure 18, have training in Weapon Safety (31%), Competency (38%), Meat processing (11%), Tracking (10%), and as Professional Hunters (5%).

4.27 MEAT USAGES

Table 21: Meat usages

Categories	Percentage
Biltong	37%
Sausages (Droë Wors)	24%
Stew	13%

Mince	9%
Braai	6%
Steak	6%
Other	5%

In response to the question what do respondents do with their meat, 37% indicated it is processed for biltong, 24% for dried sausage (Droë Wors), 13% use it for stewing meat, 9% for mincemeat purposes, 6% for Braai and as Steaks, respectively, and 5% said they needed the meat for other reasons (Table 21).

4.28 MEAT PROCESSING

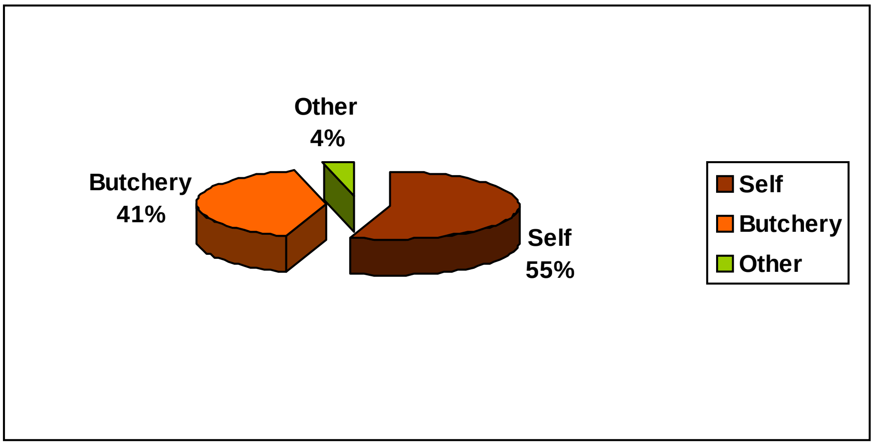


Figure 19: Meat Processing

Many (55%) of the respondents process their own meat, 41% take it to a butcher for processing, and 4% make use of other people besides themselves or a butcher. These results show the important role that butcheries play in the hunting industry (Figure 19).

SECTION D: FIRE ARMS LEGISLATION

4.29 DEDICATED HUNTERS

Table 22: Dedicated Hunters

	2005	2007
Yes	61%	69%
No	39%	31%

The majority of respondents in 2005 (61%) & 2007(69%) indicated that they are dedicated hunters, compared to 39% in 2005 and 31% in 2007 who are not (Table 22).

4.30 PROFICIENCY EXAMINATIONS

Table 23: Proficiency examinations

	2005	2007
Yes	47%	83%
No	63%	17%

In 2007, 83% of the hunters (36% higher than 2005) passed their proficiency examination. Only 17% in 2007, compared to the 63% in 2005, have not yet written the examination (Table 23). Therefore, over a period of two years there has been a significant increase in respondents who have completed these examinations.

4.31 DECLARED COMPETENT BY SAPS

Table 24: Declared Competent by SAPS

	2005	2007
Yes	**18%**	**67%**
No	82%	33%

In 2007, 49% more hunters (than in 2005) were declared competent by the SAPS (Table 24). Again, this shows a significant increase.

4.32 RE-ISSUING OF LICENSES

Table 25: Re-issuing of licenses

	2005	2007
Yes	**27%**	**78%**
No	73%	22%

This question determined the percentage of respondents that has started the process of renewal of firearm licenses. 78% of hunters started the process of re-issuing of fire-arm licenses, compared to just 27% in 2005 (Table 25). Therefore, nearly 80% of respondents have started this process, showing a significant increase when compared to 2005. By the end of 2008, all hunters should have completed this process.

4.33 EXPERIENCE OF THE SAPS

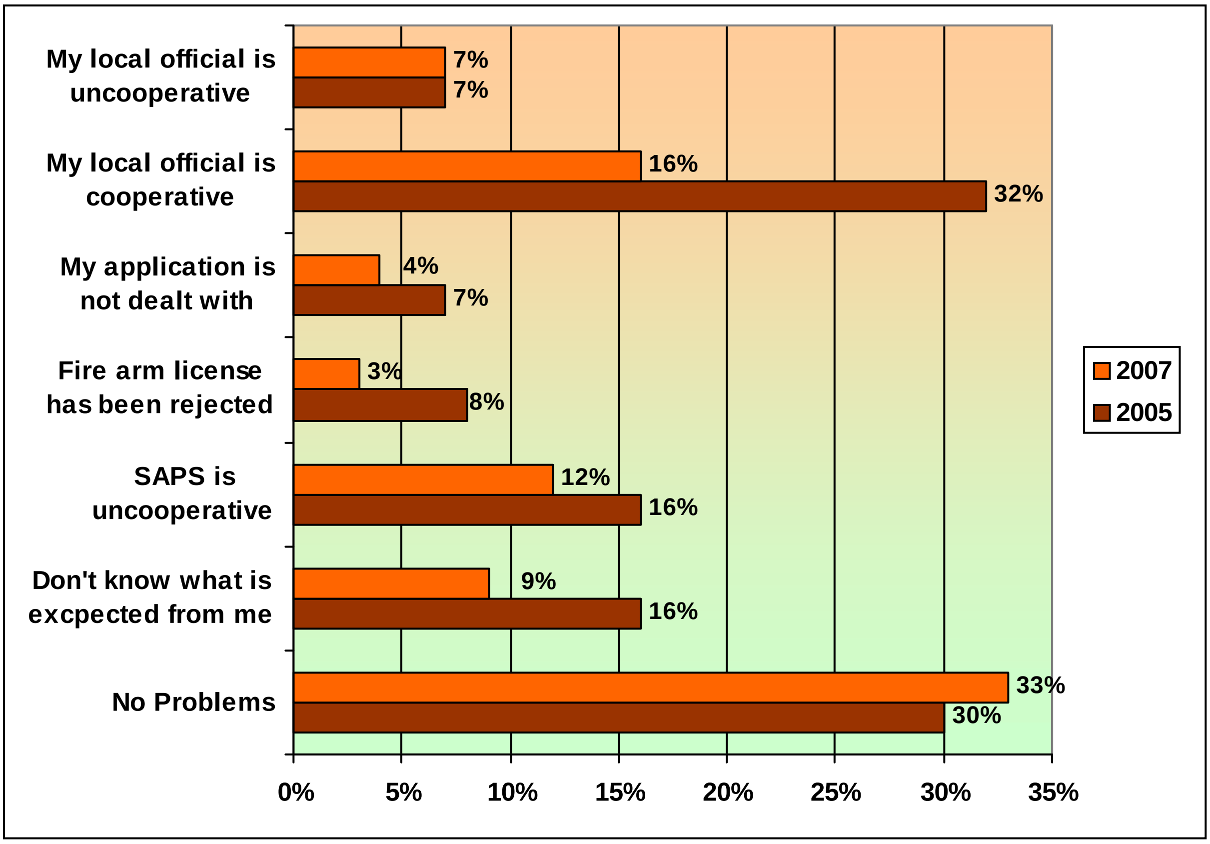


Figure 20: Experiences of the SAPS

Figure 20 above records the experiences reported by the respondents with regard to the re-issuing of licenses by the SAPS. Only 7% of the respondents said that their local fire-arm official was not cooperative, while 16% indicated that their local official was cooperative, 12% felt that the SAPS is uncooperative, 9% felt that they do not know what was expected from them, and 4% of the hunters' applications were not dealt with. Only 3% of the applications were rejected. In the results above, it is clear that the largest percentage of respondents (65%) were satisfied with the SAPS. This too is also a great improvement since 2005.

4.34 IMPACT OF FIRE-ARM ACT

Table 26: Impact of fire-arm act

Aspects	Percentage
Difficult and time consuming	26%
Restrict the use of weapons	24%
No impact	18%
Money	7%
Positive	6%
Decline in hunting	4%
Other	15%

This question was one of the primary reasons for undertaking this research project. In Table 26 respondents indicated the following impacts of the new fire-arm act on the biltong hunting industry: most of the respondents (26%) indicated that it is difficult and time consuming; 24% feel that the new fire-arm act restricts their use of weapons for hunting purposes; 18% did not experience any problems with the new law; 7% indicated that it was too expensive or a waste of money; 6% indicated that it was a good thing to implement; 4% said that they will not be able to go hunting anymore; 15% had other reasons which include:

- there is an increase in the hiring of fire-arms
- built-in walk-in safes were rejected
- feel they have to break the law to own a rifle
- it is necessary to look at the quality of weapons
- being a member (of an association) gives you only a little more advantage compared to the public.

From the responses to Table 26, it can be seen that the major adverse impact of the fire-arm act is that it is a difficult and time consuming process. This leads to a situation where hunters are handing in rifles or are discouraged from going through with the process. This situation can lead to fewer hunters in South Africa which will have a direct impact on the economic contribution of hunting to the rural provinces where it occurs. This can further lead to fewer job opportunities, as well as less land under conservation. Given the input into the economy, it is important, rather, to develop this industry and to expand it for it is makes good use of one of South Africa's greatest renewable assets (wildlife).

4.35 AWARENESS OF HUNTING REGULATIONS

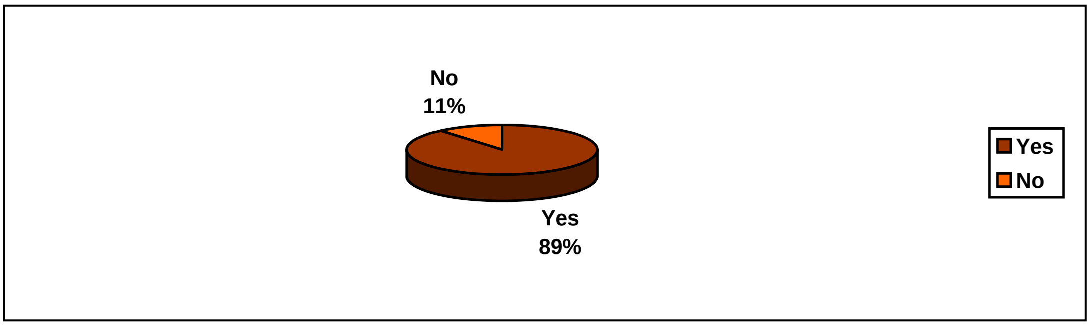


Figure 21: Awareness of hunting regulations

The vast majority (89%) of the hunters are informed of the different hunting regulations. This demonstrates that hunters are well informed about hunting regulations in South Africa (Figure 21).

5. CONCLUSIONS AND RECOMMENDATIONS

The most important conclusions from the research project are summarised in Table 27. These results are also compared with the results drawn from the 2005 survey.

Table 27: National Biltong Hunter Profile

CATEGORY	2005	2007
Gender	98% male	99% male
Language	87% Afrikaans	79% Afrikaans

Age	63% between 40-64 years of age	63% between 40-64 years of age
Marital status	89% married	89% married
Province of residents	N/A	Gauteng (35%) KwaZulu-Natal (14%) Free State (12%)
Level education	69% had some form of post-matric qualifications	73% has some form of post matric qualifications
Preferred magazine	SA Hunter (38%) Magnum (28%)	SA Hunter (22%) Man Magnum (21%)
Occupation	Self employed (22%) Administrative (18%) Manager (18%)	Self employed (25%) Professional (20%) Manager (14%)
Income	48% earn more than R250 000 per annum	77% earn more than R400 001 per annum
Prefer to hunt	68% hunt in group (average size 4 persons)	70% prefer to hunt in a group (average size 4.1 persons)
Mode of transport	4x4 (39%) Pick-up (bakkie) (44%)	4x4 (46%) Pick-up (bakkie) (41%)
Make of vehicle	Toyota (32%) Isuzu (18%)	Toyota (41%) Isuzu (14%)
Times gone hunting	3 times per year	4.2 times per year
Preferred country	South Africa (76%)	South Africa (80%)
Preferred provinces	Limpopo (37%) Northern Cape (15%) North-West (14%)	Limpopo (27%) Northern Cape (15%) NW, KZN, and EC (12%)
Average length of stay	4 days	4 days
Average expenses per season (excluding game)	R 4 130.00	R 9 805.64
Average number of species hunted	5 species	4.4 species
Average spending on game per season	R11 622.37	R 12 252.47
Total spending per	R15 752.37	R 22 058.11

person per season		
Main reason for hunting	Biltong (43%) Leisure (32%)	Biltong (37%) Leisure (28%)
Preferred type of weapon	Rifle (88%)	Rifle (82%)
Preferred type of calibre	.30-06 Springfield (17%) .308 Winchester (11%) .375 H & H Mag. (10%)	.30-06 Springfield (18%) .308 Winchester (10%) .243 Winchester (10%)
Make of calibres	Musgrave (20%) Brno (19%) Sako (15%)	Musgrave (18%) Brno (13%) Sako (12%)
Number of weapons		2 (31%) 1 (29%)
Preferred hunting area		Bushveld (59%)
Hunting Method		Stalking (57%)
Hunting Association		SAGHA (58%)
Hunting training		Competency (38%)
Meat usages		Biltong (37%) Sausages/Droë wors (24%)
Meat processing		Self (55%)
Dedicated hunters status	61%	69%
Proficiency examinations		83%
Declared competent by SA		67%
Re-issuing of licenses	27%	78%

From Table 27 it is clear that the profile (age, gender, language, place of residence) of biltong hunters is approximately the same as that of the 2005 survey, except, most noticeably, spending has increased.

Other important aspects of importance are the following:

- The top ten game species are; springbuck, impala, blesbuck, warthog, kudu, blue wildebeest, oryx, and mountain reedbuck. The top three species are exactly the same as the 2005 survey.
- Kudu remained the top income generator with impala in the second place.
- Approximately one third (34%) of respondents expect their hunting association to keep them informed, 23% require more hunting related workshops, and 22% require fire arm applications and renewals assistance.
- It is important to note that most hunters are biltong hunters (37%) while 28% hunt for leisure. This means that most hunters hunt for meat-related purposes of which 37% is used for biltong, 24% for "droë wors", and 13% for stewing.
- A large majority (78%) of respondents have already finished the process of fire-arm licence re-issuing and 82% have completed their proficiency examination.
- Nearly two thirds (65%) of respondents were satisfied with the SAPS.
- Respondents indicated that the most important effects of the fire-arm act were that it is difficult and time consuming (26%) and seen as likely to restrict the use of fire arms (24%).
- From a marketing point of view, the following magazines are recommended to market hunting destinations: SA Hunter, Man Magnum, Game & Hunt and Landbouweekblad.
- Very nearly half (49%) of all the hunters come from Gauteng and KwaZulu-Natal, which explains why most hunters prefer to hunt in their neighbouring provinces such as Limpopo (27%), Northern Cape (15%), North West (12%), and KwaZulu-Natal (12%). Distance from home also plays a significant role because of higher fuel prices. Further to this is the fact that these provinces - Limpopo, Northern Cape, North West and KwaZulu Natal - have most of the desired game species.
- Increases in the price of fuel, accommodation and food are having a significant impact on the spending of the respondents. In particular, the price of fuel will have an enormous impact on costs, thus minimising the distances travelled for hunting. This will have a negative impact on provinces such as Northern Cape and Eastern Cape if one considers the home of the primary market.

- The hunting industry attracts a great number of people and institutions and a significant number of people benefit from it.
- It is interesting to note that most hunters only use two weapons (31%) to hunt, while only 20% hunt with four or more rifles.
- Of the biltong hunters, 10% are also trophy hunters.
- Rural provinces (that is, the poorer provinces) benefit most from the hunting industry.
- The direct economic impact of biltong hunting is R4, 4 billion per season which has grown to R1, 3 billion more than the 2005 survey. One reason for this increase could be due to the length of time spent huinting as, on average, there was an increase in hunting trip frequency compared to 2005.
- Of the R 4.4 billion generated, R 1.96 billion ends up as general expenditure, which include accommodation, food, and beverages, to name a few areas of expenditure. The remaining R 2.45 billion is for game hunted of which 15% is indicated as a leakage to Namibia (R 367.6 million).
- Of the R 1.69 billion for general expenditure the biggest portion is for accommodation (R393.4 million), fuel (R353.8 million), food (R214.1 million), meat processing (R185.7 million), ammunition (R154.6 million), gear (R131.9 million), beverages (R116.4 million) and daily fees (R111.4 million).
- Therefore, game farms in South Africa generate R 2.08 billion revenue per season for game hunted.
- The average hunters hunt at least 4.4 species per season.

RECOMMENDATIONS

The following recommendations are made by the researchers:

- Provincial authorities need to take note of the results of this report as this industry can have a major impact in rural provinces. More needs to be done to grow this industry that will have positive impacts in terms both of game prices and game sales.
- SMME’s can become involved in the manufacturing of camouflage clothing and camping equipment for hunters.

- From the report, it is also clear what the preferences for venison are and this is an aspect that the distributors of meat should take into account.
- That this research be repeated within two years when the re-issuing of fire-arms process has been completed. This will enable an accurate determination of the full impact of the fire-arm act on this vital industry.
- That more marketing should be done amongst women, young and black hunters. Special hunting training days can be arranged to address this issue. Competitions aimed particularly at these emerging markets should be arranged and publicised.
- Promote more family hunting packages to give younger hunters more exposure, for example, hunting associations could arrange hunting weekends, target practising days for families and younger hunters.
- Develop an umbrella organisation that can improve the communication between different hunting associations, government, and the hunting fraternity in general. Further, it is recommended that the different hunting organisations must meet at least twice a year to discuss relevant issues concerning the hunting industry.
- That game farms be graded to improve the credibility of the hunting industry and that only graded facilities be supported by the hunting organisations.
- Hunting associations should focus on more positive marketing regarding the beneficial aspects of hunting, such as the contribution to conservation of species,, of land under conservation, and of the economic impact on rural areas.

The following recommendations were made by the respondents:

- Fire-arm licence renewal applications need to be processed faster. SAPS personnel and the related staff should be better trained to fast track the processes.
- Hunting rifles are very seldom used in crime related attacks, therefore government needs to be more accommodating regarding hunting weapons.
- Make it easier for relatives, such as sons and daughters, to use the hunting rifles of parents.

- The hunting organisations need to do more to maintain and expand the rights of hunters and the hunting industry.
- License the person and not the weapon.
- Standardise hunting legislation in the various provinces.
- Better communication between hunting organisations, government, and hunters.
- No limitations on weapons for sport related issues.
- Hunting products (game farms/ranch) need to be listed, identified and graded.
- Standardise game prices for hunting purpose.
- Promote ethical standard for game farmers since they charge one price but the final price differs.